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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,732	09/29/2003	Juliana Parente	0876-0176	1931

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EXAMINER	
YEH, EUENG NAN	
ART UNIT	**PAPER NUMBER**
2609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/673,732	PARENTE ET AL.	
	Examiner	Art Unit	
	Eueng-nan Yeh	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-18 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-18 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 08 March 2004 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date May 13, 2004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

Paragraph 19, lines 3 and 4: "showing the relationship of percent of pulp and". According to the content of this specification, the said "percent" is misleading. The proper parameter can be used here is "length" in order to be consistent with the given illustration. Appropriate correction is required.

Paragraph 20, line 5: "The device 10 of Fig. 1 includes a camera". The so called "10" has never been appeared on Fig. 1. Appropriate correction is required. The "device 10" also recited on paragraph 21, line 1.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hodgson et al. (US 2001/0012380 A1) and Beaudry et al. (US 5,822,068).

Regarding claims 1, 5, and 9, Hodgson discloses:

A method for determining sensory quality of pulp in citrus juice ("...such system could be used for fresh fruit, frozen fruit and cooked fruit..." in paragraph 5, line 17; "... results can be used for product quality assurance..." in paragraph 9, line 9) comprising: Measuring a parameter of pulp in a sample of juice using image based measuring (as depicted in FIG 1, imaging apparatus; "a computer which feeds an image to the computer. The computer analyzes the image using an appropriate software program" in paragraph 19, line 5; "software program to find particles in an image" in paragraph 20, line 1).

Further regarding claim 1, Hodgson does not explicitly disclose the way to apply this measured parameter to known sensory evaluations to determine a sensory quality of pulp in the citrus juice and correlating said sensory quality of pulp to known consumer ratings to determine whether the citrus juice has the type of pulp desired by consumers. To make matter simpler, we will set variable P as the said measured parameter, P-S as the known sensory evaluations between P and said sensory quality of pulp in the citrus juice (S), S-C as the known consumer ratings between S and consumer preference (C). Thus, from P and relationship P-S we can predict S. From S and relationship S-C we can determine C, the consumer preference.

Beaudry, in the same field of endeavor of fruit quality ("method and apparatus for estimating quality of a harvested fruit" at column 3, line 46), discloses statistical relationship between days fruit exposes to air (D) and chloroplast fluorescence (F), D-F (as depicted in Fig. 2A), and relationship between F and fruit firmness (N), F-N (as depicted in Fig. 4B). From D and relationship D-F to get F. From F and relationship F-

N to determine N, the fruit firmness which is "an indicator of overall fruit quality and texture" (at column 1, line 40).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the fruit particle analyzer made by Hodgson with the teach taught by Beaudry to establish correlated data sets such as P-S and S-C in order to find an "inexpensive" (at column 3, line 49) way to determine "the fruit selected by consumers" (at column 1, line 34).

With respect to claims 2 and 3, Hodgson further teaches that many parameters are measured and compared to known sensory evaluations ("... be examined by particle size, shape and area using pattern recognition and blob analysis to produce statistical data..." in paragraph 5, line 13; "...particle size Range of Interest [ROI], the percentage of particles within the ROI...the total area of the particles...and major and minor axis..." in paragraph 39, line 3).

With respect to claim 4: The citrus is a common term and genus of flowering plants in the family Rutaceae (most botanists now classify Microcitrus and Eremocitrus as part of the genus Citrus.) Numerous natural and cultivated origin hybrids include orange, grapefruit, tangerine, lemon etc. Nothing new is seen to have the juice made out from above citrus and blends thereof.

With respect to claim 6, Hodgson further teaches parameter measurements are provided to the user in a spread sheet ("... to produce statistical data, particle size distribution tables, aspect ratios, graphs and for other methods of data presentation..." in paragraph 5, line 15).

With respect to claim 7, as discussed and rejected under claim 1, we will set variable P as the said measured parameter, P-S as an established relationship between P and sensory perceived quantity in the mouth (S). Thus, from P and relationship P-S we can predict S, a sensory perceived quantity in the mouth.

With respect to claim 8, as discussed and rejected under claim 1, we will set variable S as the said sensory perceived quantity in the mouth for said measured parameter P, S-C as an established relationship between S and consumer rating of pulp amount (C). Thus, from S and relationship S-C we can determine C, the consumer rating.

4. Claims 10-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hodgson et al. and Beaudry et al.

Regarding claims 10, 14, and 18, Hodgson discloses:

A method for determining sensory quality in citrus generating pulp ("...such system could be used for fresh fruit, frozen fruit and cooked fruit..." in paragraph 5, line 17; "... results can be used for product quality assurance..." in paragraph 9, line 9) comprising:

generating more than one measurement of a parameter ("The measurements as described herein are usually done on a sample of a larger batch of material..." in paragraph 35, line 1) of pulp in said sample of pulp using image based measuring (as depicted in FIG 1, imaging apparatus; "a computer which feeds an image to the computer. The computer analyzes the image using an appropriate software program" in paragraph 19, line 5; "software program to find particles in an image" in paragraph 20, line 1);

determining a range of said measured parameters ("can report on individual particles or do statistical analysis on all particles found in an image" in paragraph 20, line 6);

Further regarding claim 10, Hodgson does not explicitly disclose the way to apply this range of said measured parameters to known sensory evaluations to determine a sensory quality of pulp in the citrus juice and correlating said sensory quality of pulp to known consumer ratings to determine whether the citrus juice has the type of pulp desired by consumers. To make matter simpler, we will set variable P as the said measured parameter range, P-S as the known sensory evaluations between P and said sensory quality of pulp in the citrus juice (S), S-C as the known consumer ratings between S and consumer preference (C). Thus, from P and relationship P-S we can predict S. From S and relationship S-C we can determine C, the consumer preference.

Beaudry, in the same field of endeavor of fruit quality ("method and apparatus for estimating quality of a harvested fruit" at column 3, line 46), discloses statistical relationship between days fruit exposes to air (D) and chloroplast fluorescence (F), D-F (as depicted in Fig. 2A), and relationship between F and fruit firmness (N), F-N (as

depicted in Fig. 4B). From D and relationship D-F to get F. From F and relationship F-N to determine N, the fruit firmness which is "an indicator of overall fruit quality and texture" (at column 1, line 40).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to utilize the fruit particle analyzer made by Hodgson with the teach taught by Beaudry to establish correlated data sets such as P-S and S-C in order to find an "inexpensive" (at column 3, line 49) way to determine "the fruit selected by consumers" (at column 1, line 34).

With respect to claims 11 and 12, Hodgson further teaches that many parameters are measured and compared to known sensory evaluations ("... be examined by particle size, shape and area using pattern recognition and blob analysis to produce statistical data..." in paragraph 5, line 13; "...particle size Range of Interest [ROI], the percentage of particles within the ROI...the total area of the particles...and major and minor axis..." in paragraph 39, line 3).

With respect to claim 13: The citrus is a common term and genus of flowering plants in the family Rutaceae (most botanists now classify Microcitrus and Eremocitrus as part of the genus Citrus.) Numerous natural and cultivated origin hybrids include orange, grapefruit, tangerine, lemon etc. Nothing new is seen to have the juice made out from above citrus and blends thereof.

With respect to claim 15, Hodgson further teaches parameter measurements and range are provided to the user in a spread sheet ("... to produce statistical data, particle size distribution tables, aspect ratios, graphs and for other methods of data presentation..." in paragraph 5, line 15).

With respect to claim 16, as discussed and rejected under claim 10, we will set variable P as the said measured parameter range, P-S as an established relationship between P and sensory perceived quantity in the mouth (S). Thus, from P and relationship P-S we can predict S, a sensory perceived quantity in the mouth.

With respect to claim 17, as discussed and rejected under claim 10, we will set variable S as the said sensory perceived quantity in the mouth for said range of measured parameters P, S-C as an established relationship between S and consumer rating of pulp amount (C). Thus, from S and relationship S-C we can predict C, the consumer rating.

Rule 105, Requirement for Information

5. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

6. In response to this requirement, please provide the title, citation and copy of each publication/research that any of the applicants relied upon to develop the disclosed subject matter that describes the applicant's invention, particularly as to developing:

a) An established relationship between the parameter(s) and sensory perceived quantity in the mouth to determine a sensory perceived quantity in the mouth for the measured parameter(s) (paragraph 9).

b) An established relationship between sensory perceived quantity in the mouth and consumer ratings of pulp amount to predict consumer acceptability for the sensory perceived quantity in the mouth for the measured parameter(s) (paragraph 9).

7. For each publication/research, please provide a concise explanation of the reliance placed on that publication/research in the development of the disclosed subject matter.

8. The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained may be accepted as a complete reply to the requirement for that item.

9. This requirement is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

Conclusion

10. This Office action has an attachment requirement for information under 37 CFR 1.105. A complete reply to this Office action must include a complete reply to the attached requirement for information. The time period for reply to this attached requirement coincides with the time period for reply to this Office action

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Sorcerer Technical Specification (2002.12.11) – Automatic image analysis system, particle size and shape analysis, pulp and paper quality, data is transferred directly to Microsoft Excel.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eueng-nan Yeh whose telephone number is 571-270-1586. The examiner can normally be reached on Monday-Friday 8AM-4:30PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian P. Werner can be reached on 571-272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eueng-nan Yeh
Assistant Examiner
2609

BRIAN WERNER
SUPERVISORY PATENT EXAMINER